



Forest Insect Laboratory

Coeur d'Alene, Idaho

Nov. 26, 1935

Director

Intermountain Forest Experiment Station

Ogden, Utah

Dear Sir:

There is enclosed a brief report covering my examination of the Experimental Forest at Idaho City, Idaho. I regret that I have been delayed in submitting this memorandum, but shall be pleased to offer further information on any points which are not entirely clear.

Trusting that we may be of service to you in the future,

I remain

Very truly yours,

James C. Evenden
Entomologist

cc to:

Regional Forester, Missoula ✓

Director, N.R.M. Forest Experiment Station, Missoula

Regional Forester, Ogden

Mr. C. A. Connaughton, Ogden

STATUS INSECT INFESTATIONS
EXPERIMENTAL FOREST
IDAHO CITY, IDAHO

under direction of

INTERMOUNTAIN FOREST EXPERIMENT STATION
OGDEN, UTAH



At the request of Mr. E. L. Mowat I spent August 31, 1935, with Messrs. Mowat and Connsughton in making an inspection of the timber stand of the Experimental Forest at Idaho City, Idaho. The purpose of this examination was to determine if the existing bark beetle infestations were sufficiently serious to justify the institution of control. Several areas with different problems were visited during the day.

An area of mature ponderosa pine was traversed on a new forest improvement road which lead out of the drainage, permitting several good views to be obtained from the higher elevations. Scattered "red-tops" (1934 attacks) were seen throughout the area with the usual number of black tops and snags. An examination of these "red-tops" showed them to have been killed by the western pine beetle (Pandroctonus brevicornis Lec.). Though this infestation was not considered as being severe enough to warrant the institution of control, normal infestation of this character always constituted a real danger to the safety of the timber stands in question. It was therefore recommended that the potentialities of this situation be recognized and that the status of the infestation be checked each year by an extensive survey. Furthermore, as the Boise-Payette Lumber Company closed their operations within

the Boise Basin during November 1934, there is always the possibility of an increase or flare-up following the close of such large scale logging projects. The possibility of successfully instituting control within this area is questionable. There are other areas adjacent which are timbered sufficiently to carry an infestation of the western pine beetle and which would perhaps prevent this body of mature pine from being considered an "infestation unit" where control measures could be successfully instituted. This question will need receive serious consideration if control measures are ever contemplated. At the higher elevations of this drainage and scattered throughout the entire basin there are a few spots of Douglas fir trees killed by the Douglas fir beetle. No action is recommended for these outbreaks.

A few miles to the east of Idaho City, there was another area of mature ponderosa pine which had been logged by the Boise-Payette Lumber Company in 1933 under an economic selection cutting of both logs and trees. This operation resulted in a heavy accumulation of large-sized slash including many cull logs. Furthermore, an economic selection cutting of this character naturally leaves a residual stand that contains many trees which have a low degree of resistance to bark beetle attack. In this residual stand there had been a rather heavy 1934 loss, which one could consider an epidemic. However, as there were a number of factors involved in the death of these trees, it was believed to be a situation resulting from the unsanitary condition in which the area had been left by the operation. To further complicate

this problem a large number of the trees had been injured by a 1934 fire. In 1934 the larger pieces of slash were attacked by secondary bark beetles, producing broods which upon emergence in the late summer of that year attacked the tops of the more susceptible standing trees. As these trees had very short, scanty crowns, the top-killing resulted in their death. The evidence of such killing is the sour sap condition found beneath the bark at the base of the trees, which apparently results from the functioning of a normal root system with no means of transpiration. In many cases there are no insect attacks at the base, though Hylurgops subcostulatus often attacks such material. Though a few 1934 and 1935 attacks of the western pine beetle were recorded, most of the insect-killed trees were mixed attacks of this species and Ips oregoni. The institution of control measures against such an infestation would not be justified, as it is believed that a normal condition will soon be restored. Furthermore, it would seem that the removal of the trees susceptible to the attacks of insects and having no commercial value at the time of the operation will be of material benefit to the stand as well as offering an insurance against a more serious epidemic in future years.

Some small experimental thinning plots in ponderosa pine were examined. The slash resulting from this thinning had been attacked by Ips oregoni, though very little brood had developed. However, these experiments were on a very small scale, which did not permit drawing conclusions as to the possible insect damage which might follow a larger-scale operation.

A few miles to the north of Idaho City, on an area which had been logged and subsequently swept by a severe fire in 1934, there were a number of trees which were green the fall following the fire but now appear as red-tops. Though the death of a few of these trees may have been attributable to the attacks of bark beetles, in most instances the primary cause was the fire injury to the root collar.

Around the headquarters building a number of small trees have died since the improvements were started. It is believed that this loss of scenic trees is the indirect result of the landscaping of this area. The lower limbs were cut from the bole of these trees, and the underbrush removed, which permitted a rapid drying out of the soil during a very dry season on an open, exposed, rather steep slope. Though some of these trees were attacked by secondary bark beetles, one may be sure that their resistance to such enemies was not increased as a result of the change in growing conditions to which they were subjected.

Throughout the timber stands of the Boise Basin there are spot-killings of ponderosa pine poles and reproduction by Ips oregoni . This is a condition which one encounters in all large bodies of ponderosa pine and usually results from an abnormal supply of favorable host material or extreme dry seasons. Such killings are short-lived, usually consisting of but one period of attack. There has also been an infestation of the western pine beetle in this general region which, if one can judge from the number of old snags, was more than a normal condition

during some previous period.

Though I do not feel that there are any potentially serious infestations within the experimental forest at this time, I would recommend that the existing situation be carefully watched. Officers from this laboratory try to visit this forest each year for the purpose of being of whatever assistance possible. I will be glad to offer further explanation on any of the issues discussed in this memorandum.

Respectfully submitted,

James C. Evenden
Entomologist

Coeur d'Alene, Idaho
November 21, 1935